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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,585	02/03/2004	Louis J. Dietz	SURR1 8/D	3811
22442	7590	07/12/2005	EXAMINER	
SHERIDAN ROSS PC 1560 BROADWAY SUITE 1200 DENVER, CO 80202			EDWARDS, PATRICK L	
			ART UNIT	PAPER NUMBER
			2621	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/771,585

Applicant(s)

DIETZ ET AL.

Examiner

Patrick L. Edwards

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2005.
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-3 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12-03-2004.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

1. The response received on 07 April 2005 has been placed in the file and was considered by the examiner. An action on the merits follows.

Response to Arguments

2. The arguments filed on 07 April 2005 have been fully considered. A response to these arguments is provided below.

35 USC 112, Second Paragraph Rejections

Summary of Argument:

Applicant has amended the claim and corrected the indefinite term "noise threshold". Applicant argues that this amendment should overcome the previous 112(2) rejection.

Examiner's Response:

The examiner agrees. The rejection is hereby withdrawn.

Prior Art Rejections

Summary of Argument:

1. Applicant alleges that "Green does not disclose the use of thresholding to improve the detection of particles in a sample, as claimed." Specifically, applicant argues that the present invention uses thresholding for improving particle detection, but that Green uses thresholding for classifying a sample region into categories.

2. Applicant alleges that Green fails to disclose the step of "scanning a fixed volume capillary." Specifically, applicant argues that Green discloses a two dimensional scan that provides no information on volume and that this prevents the Green reference from anticipating any of claims 1-3.

Examiner's Response:

1. Applicant's arguments have been fully considered but are not persuasive. Applicant's argument amount to a general allegation about the claimed subject matter and how it differs from the Green reference. However, applicant has failed to address the actual claim limitations. Accordingly, applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

2. The examiner disagrees. Contrary to the applicant's characterization, the claim does not require that the scan provide depth information or absolute cell counts. Indeed, the claim simply requires the scanning of a fixed volume capillary. Green meets this limitation because the volume of the field 14 (as can be seen in figure 3 of the green disclosure) is fixed. Its actual volume is irrelevant so long as the value is unchanging. Applicant is respectfully reminded that claims are given their broadest reasonable interpretation in light of the specification, but that limitations from the specification are not to be read into the claims (MPEP 2144).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Green (U.S. Patent No. 3,999,047).

With regard to claim 3, Green discloses scanning a fixed volume capillary containing a particle sample (Green col. 8 lines 53-61, in conjunction with Figures 1b and 3). The Green reference discloses scanning a blood sample 16 on field 14 (these elements are shown in Figure 3). The blood sample 16 disclosed in Green is analogous to the 'sample containing particles' recited in the claim. It follows that field 14 disclosed in Green is analogous to the 'capillary' recited in the claim (the applicant's specification states that 'capillary array 10' contains samples for analysis (see paragraph [0050])). This 'capillary array' is shown Figure 1 of the applicant's specification, and should be compared to element 14 in Figure 3 of the Green disclosure.

Green discloses that this scanning operation generates a plurality of channels of data (Green col. 6 line 63 – col. 7 line 1 in conjunction with Figure 1b).

Green further discloses that each of these data channels comprises a distinct detectable characteristic and a distinct background characteristic (Green col. 6 lines 7-12, *inter alia*).

Green further discloses sampling each of the channels of data to produce corresponding sets of source pixel values (Green col. 6 line 63 – col. 7 line 1).

Green discloses calculating the threshold for particle detection independently in each set of source pixel values (Green col. 5 lines 36-37 and col. 9 lines 38-44: The first cited passage discloses histogramming as a way to calculate thresholds. The second cited passage shows that these thresholds are calculated independently in each set of source pixel values (i.e. each digitized channel)).

Green further discloses performing particle detection independently in each set of source pixels values using the corresponding threshold (Green col. 5 line 45 – col. 6 line 6).

With regard to claim 2, several of the limitations recited in the claim were discussed in the above argument with respect to claim 3. Those limitations will not be re-addressed. Steps (f) and (g) of claim 2, however, contain limitations not previously discussed. These limitations will be addressed below.

With regard to step (f), Green further discloses identifying, for each particle identified in a particular set of source pixels values in step (e), the corresponding pixels in the remaining sets of source pixel values (Green col. 6 lines 7-14, referring to the table on col. 5 lines 55-65).

With regard to step (g), Green discloses analyzing the pixels identified in step (f) (2) and (3) (Green col. 6 lines 12-14: The reference discloses that "sample region classification signals" are produced. Green elaborates on

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the subject of producing "sample region classification signals" at col. 11 lines 1-9 of the specification. We can easily see from this passage, *inter alia*, that the pixels are identified and then analyzed.

With regard to claim 1, the limitations of the claim which have been discussed above will not repeated.

With regard to step (c), Green discloses generating sets of enhanced pixel values by independently modifying each set of pixel values to selectively enhance spatial features indicative of a target particle (Green col. 10 lines 27-57: The Green reference discloses spatially filtering each set of pixels. This spatial filtering as disclosed in Green is analogous to "generating sets of enhanced pixel values" as recited in the claim).

With regard to step (d), Green further discloses removing the distinct background characteristics from a channel (Green col. 12 lines 60-68: The "intermediate classifications" table shown in the cited passage shows that the background characteristics are set to zero (i.e. "removed")).

With regard to steps (g), (h), and (i), the limitations of these steps were discussed in the above rejection of steps (ii), (iii), and (iv), respectively, of claim 2.

The final paragraph of the claim merely repeats the limitations found in steps (g), (h), and (i).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick L Edwards whose telephone number is (571) 272-7390. The examiner can normally be reached on 8:30am - 5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Mancuso can be reached on (571) 272-7695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

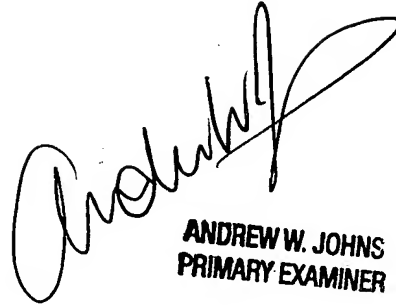
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Patrick L Edwards

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**ANDREW W. JOHNS
PRIMARY EXAMINER**